Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1.   (Canceled)

2.   (**Currently Amended**) A method, comprising:

forming a two-dimensional array of pixels;

allowing the pixels to receive light representing an image to be detected by allowing the pixels to accumulate light beginning at a first time;

in each frame readout, reading out each of the pixels at least at both of a first shorter integration time, which begins at said first time, and ends at a second time and a second longer integration time, which begins at said first time and ends at a third time subsequent to said second time; and

resetting ~~reach~~ **each** pixel after each readout of the pixel.

3.   (Previously presented) A method, comprising:

forming a two-dimensional array of pixels;

allowing the pixels to receive light representing an image to be detected by allowing the pixels to accumulate light beginning at a first time;

in each frame readout, reading out each of the pixels at least at both of a first shorter integration time, which begins

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at said first time, and ends at a second time and a second longer integration time, which begins at said first time and ends at a third time subsequent to said second time; [and]

resetting each pixel after each readout of the pixel; and

processing information from the readouts to combine portions of information from the first shorter integration time with information from the readouts from the second longer integration time, to form a composite readout.

4.   (Previously presented) A method comprising:

forming a two-dimensional array of pixels;

allowing the pixels to receive light representing an image to be detected by allowing the pixels to accumulate light beginning at a first time;

in each frame readout, reading out each of the pixels at least at both of a first shorter integration time, which begins at said first time, and ends at a second time and a second longer integration time, which begins at said first time and ends at a third time subsequent to said second time wherein said reading out comprises reading out first row of pixels representing said first shorter integration time and a second row of pixels representing said second longer integration time; and

resetting each pixel after each readout of the pixel.

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5.   (Previously presented) A method as in claim 4, wherein said reading out comprises reading out the pixels into a first buffer representing the shorter integration time, and reading out the pixels into a second buffer representing the longer integration time.

6.   (Previously presented) A method as in claim 4, wherein the pixels are non-destructively read out, and said reading out comprises reading out the pixels first at said shorter integration time and second at said longer integration time.

7.   (Previously presented) A method as in claim 4, wherein said reading out comprises reading out the pixels from the shorter integration time into the same buffer.

8.   (Previously presented) A method as in claim 4, further comprising reading out a third row of the pixels representing information at a third integration time.

9.   (Previously presented) A method as in claim 4, wherein said pixels are active pixels.

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10. (Previously presented) A method, comprising:

allowing an array of pixels to receive light representing an image to be detected;

reading two separated rows of pixels in each single row readout process to produce two different readout signals with different integration times for each pixel in a single frame readout wherein said reading reads an entire row at each reading time; and

resetting each pixel after each readout of the pixel.

11. (Previously presented) A method, comprising:

allowing an array of pixels to receive light representing an image to be detected;

in each frame readout, reading two separated rows of pixels in each single row readout process, wherein said two separated rows of pixels represent a first row of pixels representing the image integration for a shorter integration time, and a second row of pixels representing the image integration for a longer integration time and

resetting each pixel after each readout of the pixel.

12. (Previously presented) A method as in claim 11, wherein said reading comprises non-destructively reading.

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13.   (Previously presented) A method as in claim 11, wherein said reading comprises destructively reading.

14.   (Canceled)

15.   (Previously presented) A method as in claim 10, further comprising increasing a dynamic range of information obtained from a pixel by combining information from a first pixel with a first integration time and information from said first pixel with a second integration time.

16.   (Previously presented) A method as in claim 10, further comprising reading a third row of pixels during each single row readout process.

17.   (Previously presented) A method as in claim 13, further comprising carrying out correlated double sampling as part of said reading.

18.   (Previously presented) A method as in claim 11, wherein said reading comprises reading of each of said rows to a separate storage area.

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19.   (Previously presented) A method as in claim 11, wherein said pixels are active pixels.

20.   (Previously presented) A system, comprising:

a semiconductor substrate defining a two-dimensional array of pixels, each of said pixels formed with a photoreceptor portion therein, and at least one active readout portion therein,

a readout control part, controlling said pixels to allow the pixels to receive light representing an image to be detected, and allowing the pixels to accumulate light for an integration, and to control the pixels to readout information, within each frame readout, from the pixels representative of light reception for a first integration time starting at a first time, and a second integration time longer than said first integration time also starting at said first time, such that each pixel provides light output integrated over both of said first and second integration times for each pixel within each frame readout, wherein the readout control part is configured to reset each pixel after each readout of the pixel.

21.   (Previously presented)   A system as in claim 20, wherein said readout control part also controls said pixels to accumulate light for a third integration time.

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22.   (Previously presented)   A system as in claim 20, further comprising an image information combiner, which combines information from the first shorter integration time with information from the second longer integration time, to produce composite information about the image.

23.   (Previously presented)   A system as in claim 20, further comprising a first buffer, on the semiconductor substrate, receiving information indicative of the light integrated for said first integration time, and a second buffer, receiving information indicative of the light integrated for the second integration time.

24.   (Previously presented)   A system as in claim 20, further comprising a buffer receiving information indicative of the light reception for the first integration time and indicative of the light reception for the second integration time.

25.   (Canceled)

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